AMENDMENTS

Please amend the application as indicated hereafter.

In the Claims

Please amend the claims as indicated below. The language being added is underlined ("___") and the language being deleted contains strikethrough ("—"):

1.   (Currently Amended) A method comprising:

directing to a first output queue at a first station of a communication network, message data units to be transmitted over a communication medium and having a first traffic classification;

directing to a second output queue at the first station, message data units to be transmitted over the communication medium and having a second traffic classification;

sensing the communication medium for an opportunity to transmit message data units without interference from message data units transmitted by a second station, according to sets of rules that vary by traffic classification yet are common to the first station and the second station.

2.   (Original) The method of claim 1, further including allowing only one of the first and second output queues to transmit, if the first and second output queues each contain message data units scheduled to be transmitted during a particular opportunity to transmit, according to said sets of rules.

3.   (Original) The method of claim 1, further including attempting to retransmit, after a respective interval defined differently by each said set of rules, any message data unit transmitted over the communication medium by a station that collides with a message data unit transmitted by another station.

4.   (Original) The method of claim 3, further including attempting to initially transmit a first message data unit from the second output queue of the first station, in accordance with the set of rules corresponding to the traffic classification thereof, as if an unsuccessful attempt to transmit the first message data unit had already been made during a previous transmission opportunity.

5.   (Original) The method of claim 4, wherein an attempt is made to transmit the first message data unit after an interval specified by the set of rules corresponding to the traffic classification of the second queue.

6.   (Original) The method of claim 5, wherein the interval is within a respective random variable window having a corresponding minimum and maximum duration.

7.   (Original) A method for media access control in a communication network which includes a plurality of communication stations adapted to communicate over a shared communication medium and to support quality of service classes of communication sessions wherein message data units corresponding to one of said quality of service classes has a different priority level than message data units corresponding to another of said quality of service classes, comprising:

directing to a first output queue at a first station of the communication network, message data units to be transmitted and having a first level of priority;

directing to a second output queue at the first station, message data units to be transmitted and having a second level of priority;

sensing the communication medium for an opportunity to transmit data message units without colliding with data message units transmitted by any other station, based on a set of rules that are specific to each priority;

if the first and second output queues each contain message data units to be transmitted during a particular opportunity to transmit, invoking a mechanism that preferentially transmits a message data unit by priority level and said sets of rules.

8.   (Original) The method of claim 7, further including attempting to retransmit over the communication medium, after a respective interval of random duration defined differently for each corresponding level of priority, any message data unit transmitted by the first station that externally collides with a message data unit transmitted by another station over the communication medium; and

attempting to transmit a message data unit from the second output queue, over which a message data unit from the first output queue was preferentially transmitted, after an interval of random duration applicable to retransmission of an externally colliding message data unit at the second level of priority.

9.   (Currently Amended) A system for exchanging message data units over a communication medium shared by other systems in a local area network, comprising:

a first output queue adapted to receive message data units having a first traffic classification, said first output queue being operable to release message data units for transmission over a communication medium in accordance with a first set of rules corresponding to the first traffic classification;

a second output queue adapted to receive message data units having a second traffic classification, said second output queue being operable to release message data units for transmission over a communication medium in accordance with a second set of rules corresponding to the second traffic classification; and

a transceiver operative to sense the communication medium for an opportunity to transmit the message data units from each of the first and second output queues, without interference from message data units transmitted by a second station, and to transmit the data message data units from each of said first and second output queues according to said first and second sets of rules.

10.   (Original) The system of claim 9, wherein said communication medium is a wireless channel and wherein said transceiver includes an RF transmitter and antenna.